PDAC IN THE NEWS | INDIGENOUS TRUTH & YOUTH | 2024 MCW AWARD | S-IMEW 2024 | PHOTO CONTEST | THIS MONTH IN HISTORY

CORE

THE VOICE OF MINERAL EXPLORATION

FALL 2024

PDAC

PDAC 2025 PREVIEW

LOOK AHEAD TO THE PROGRAMMING AND OPPORTUNITIES AT THE WORLD'S PREMIER MINERAL EXPLORATION & MINING CONVENTION

CORE is produced by staff primarily located in Toronto, Ontario, on the traditional territory of the Mississaugas of the Credit First Nation, the Haudenosaunee, the Wendat, also known as the Huron, the Chippewa, the Anishnabeg and all other Indigenous nations that have lived on these sacred lands since time immemorial.

As the voice of mineral exploration and development in Canada, PDAC is committed to reconciliation through respectful dialogue and the creation of meaningful and mutually-beneficial partnerships between First Nations, Inuit and Métis communities and industry.

We respect that as an industry that operates the world over, we engage with organizations and individuals far beyond these lands, and wish to acknowledge all Indigenous lands and peoples across the world, wherever you are reading this from and call home.

CORE

FALL 2024

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PDAC IN THE NEWS

FALL 2024

PDAC HOSTS ITS SECOND ANNUAL OPEN HOUSE

Over 75 PDAC members gathered in Toronto for our second annual Open House on September 24. Held at the association's offices, members and mining organizations from Ontario engaged with PDAC's Board of Directors, committee members and staff throughout the evening.

For the second consecutive year, members were delighted to view an exclusive display of critical minerals from the stunning Kirwin Collection, along with a new showcase of unique Indigenous art, presented by the Royal Ontario Museum (ROM). The Open House also featured exhibits showcasing PDAC's extensive programming, including our Student & Early Career program, Geoscience and Innovation, Sustainability, and Access to Capital.

Guests were given a sneak preview of new videos produced by PDAC that highlight our Indigenous and Membership programs. Prize draws were held for two All-Access Convention passes and two PDAC swag bags, and the enjoyable atmosphere was enhanced with the ever-popular reception and photo booth.

PDAC also connected with members in Winnipeg at the Central Canada Mineral Exploration Convention (CCMEC), held from Nov. 4-5. As a CCMEC sponsor and exhibitor, the association hosted a networking reception on the first day.

PDAC ENGAGES THE INDUSTRY AT FALL EVENTS

With over 7,800 national and international members, PDAC is proud to positively engage with the industry on a global scale. Association representatives including the board president and staff participate regularly at events to speak on behalf of the Canadian mineral exploration and mining development community.

In September, Alexandra Armstrong, Analyst for Indigenous and Regulatory Affairs, represented PDAC as a speaker on the Indigenous Mining and Prosperity panel at the 2024 Forward Summit East in Orillia, Ontario. This event is the organization's largest annual gathering, bringing together Indigenous and non-Indigenous leaders who are advancing positive, effective business relationships with Indigenous communities across Canada. Another valuable engagement took place in November at the 13th Annual Energy and Mines Toronto Summit, themed "The Decarbonized Mine." Nicole Kulp, Analyst for Sustainability, chaired "The Carbon Offset Debate" panel, which explored the benefits and challenges of using carbon offsets in the pursuit of mining sector decarbonization.

Also in November, PDAC President Raymond Goldie was in Newfoundland and Labrador, presenting at the St. John's Mineral Resources Review 2024 conference and exhibition. This annual event is "a collaborative effort between the Newfoundland and Labrador Branch of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) and the Department of Industry, Energy and Technology, Government of Newfoundland and Labrador," attracting almost 1,000 national and international delegates. The presentation, titled "Ups and Downs Abound in Canada's Mineral Industry" focused on several key changes in mineral exploration capital, market pricing and government initiatives in Canada and globally, and how PDAC is responding to the concerns that have come from these developments.

Jeff Killeen, PDAC's Director, Policy & Programs was in Montreal, Quebec in October for the Quebec Mineral Exploration Association's (QMEA) Xplor convention. He participated with a group of capital and market specialists in an investment-finance panel titled "Stake Market." Earlier in October, Killeen appeared at Export Development Canada's (EDC) Critical Minerals Roundtable Discussion in Toronto. Attended by dozens of international representatives – including Australia, the United Kingdom, the United States, Japan, Korea, Canada and Finland – the goal of EDC's event was to foster support for global investment in sustainable and secure critical mineral supply networks and partnerships.

PDAC IN THE NEWS

FALL 2024

OCTOBER WAS WOMEN'S HISTORY MONTH

For 22 years, Canada has celebrated the contributions of women, girls, and all female-identifying individuals toward building a more diverse, inclusive, and successful nation.

Since 1992, October has been designated as Women's History Month, with an annual theme. This year, the theme is 'Women at Work: Economic Growth Past, Present and Future', which Canada.ca explains, "highlights the significant contributions women have made to the workforce throughout history, and the critical role they continue to play in driving economic innovation and progress that has benefited Canada as a whole."

PDAC's longest-serving president, Viola R. MacMillan, led the association from 1944 to 1964 and was instrumental in transforming our annual convention into the world-renowned event it is today. PDAC remains committed to fostering a diverse workforce within the mineral exploration and development industry with policies and programs that emphasize creating an improved economic and socially equitable community in Canada, and around the world.

PDAC ANNOUNCES 2025 AWARD RECIPIENTS

Established in 1977, the PDAC Awards honor exceptional achievements and excellence within the Canadian and international mineral exploration and mining sectors. The PDAC Awards Committee – comprised of industry leaders with diverse roles, expertise, and experience – recommends recipients, who are then selected by the Board of Directors.

PDAC is proud to announce five outstanding industry performers for 2025. The Canadian Malartic Exploration Team are the Bill Dennis Award recipients; David Kritterdlik received the Skookum Jim Award; Teck Resources and UN Women: Originarias Program received the Sustainability Award; the Thayer Lindsley Award went to The Onto Discovery team, and John Robins received the Viola R. MacMillan Award.

Speaking about the 2025 recipients, Raymond Goldie, PDAC's president said, "Their remarkable accomplishments demonstrate the crucial role of innovation, resourcefulness, and leadership in uncovering the minerals that power our modern world."

The 2025 PDAC Awards recipients will be celebrated on March 4, 2025, at the Awards Gala & Nite Cap event at the Fairmont Royal York Hotel, held during PDAC 2025. For more information please visit pdac.ca/awards.

PDAC LAUNCHES ITS NEW ONLINE EXPERIENCE

As the leading voice of Canada's mineral exploration and development sector, PDAC is dedicated to providing the most relevant and up-to-date information to over 7,800 members, and the industry. Over the past year, PDAC has focused on enhancing the accessibility and visibility of its content, programs, and policies through the development of a new website that reflects the industry's growth and dynamic future.

On November 4, 2024, PDAC launched the redesigned website, providing a modular, user-friendly experience optimized for all devices and applications. This major upgrade, which began in 2023, also features streamlined navigation, convenient login portal, as well as a modern, cohesive design through every page.

Our updated online experience was made possible by the dedication of the association's staff and committees, as well as consultants and vendors working collaboratively with all of our teams. PDAC is excited for you to experience our new site, so please visit pdac.ca today to see the next evolution of the association.

PDAC'S RESPONSES & SUBMISSIONS

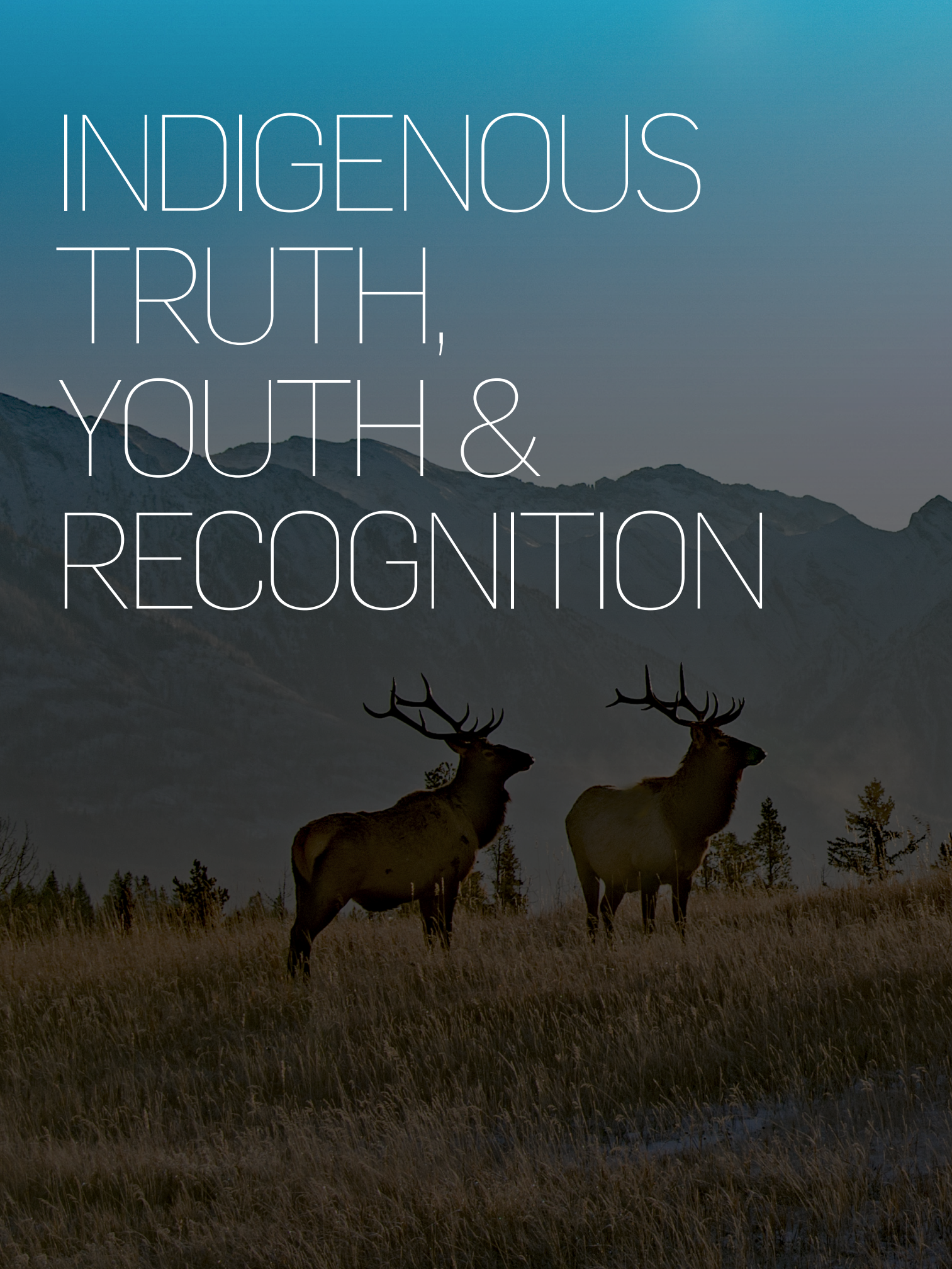
A core mandate of PDAC is to advocate for increased government support for the exploration industry and to strengthen Canada's minerals financial market. Recently, the association has presented key recommendations to various government ministries, regulatory agencies, and standing committees on behalf of its members.

This fall, PDAC submitted four responses to the federal government on critical social and economic issues impacting the industry. These recommendations address new "greenwashing" provisions under the recent amendments to Bill C-59, limitations identified in the Impact Assessment Act's Physical Activities Regulations discussion paper, proposals for the federal emergency orders regarding Boreal Caribou populations in Quebec, and amendments to the Clean Technology Manufacturing Investment Tax Credit and the Alternative Minimum Tax.

On the economic front, PDAC also submitted recommendations to Finance Canada during the pre-budget 2025 consultations. The seven key recommendations include the renewal of the Mineral Exploration Tax Credit (METC) and the Critical Mineral Exploration Tax Credit (CMETC), adjustments and expansions for the current flow-through shares (FTS) regime, recapitalizing the Critical Mineral Infrastructure Fund (CMIF), increasing funding for the Geological Survey of Canada, and the development of a simplified, "one-window" pathway to boost Indigenous participation and provide more equitable access to the mineral industry.

To learn more about PDAC's advocacy work, and to read our full responses to the regulatory initiatives outlined above, visit pdac.ca/programs-and-advocacy.

INDIGENOUS TRUTH, YOUTH & RECOGNITION



On September 30 of this year, Canada marked its third annual National Day for Truth and Reconciliation. This federal day of remembrance and recognition honours residential school victims and survivors, and acknowledges Canada's role in these tragedies.

As Michael Fox, President/CEO of Indigenous Community Engagement (ICE) said, "It is also a moment to think about renewing relationships with Indigenous Peoples and advancing reconciliation based on respect. It is about creating space to be heard and to heal, as well as ensuring Indigenous relevancy and resilience."

PDAC's Indigenous Affairs Committee – which is comprised of 16 mineral exploration experts and Indigenous leaders – provides guidance for our members and calls on both governments and private companies to invest more in the health, education, skills and economic development opportunities for Indigenous Peoples. The mineral industry in Canada is the largest private-sector employer of people identifying as Indigenous, and PDAC continues to strongly advocate for the mineral industry and governments to be leaders in developing mutually beneficial partnerships with Indigenous communities.

This year, PDAC introduced two new initiatives aimed at providing respectful acknowledgement of Indigenous Peoples and their ancestral lands, and to help promote meaningful communication and active, equal participation in the industry.

Indigenous Youth And Early Career Ambassador Program

PDAC believes that early engagement is one of the cornerstones of building relationships between Indigenous communities and our industry. The association recognizes that educating a new generation on the economic and social benefits of mineral exploration and mining development is of the utmost importance. It is why we are honoured to debut the Indigenous Youth and Early Career Ambassador Program at the PDAC 2025 Convention.

PDAC's annual convention in Toronto, Canada, offers one of the most important platforms to discuss fostering cooperative and respectful relationships by bringing communities, Indigenous-owned companies and industry together in one setting to share their experiences, exchange ideas and network. Knowing that the industry needs fresh faces and new members, the Indigenous Youth and Early Career Ambassador Program offers Indigenous students and early-career individuals financial assistance for travel and accommodation expenses for the Convention, as well as an All Access Pass, invitations to exclusive events, unique mentoring opportunities and more.

Part of the inspiration for creating the Ambassador Program came from what was shared during various Indigenous Program sessions, presentations, and in conversations with Convention attendees. The importance of showing Indigenous youth what opportunities the industry provides was also a strong message that came out of this year's Sharing Circle: A Gathering of Indigenous Leaders with PDAC's president. The Ambassador Program was developed to support youth in attending Convention in order to introduce them to Indigenous leaders, entrepreneurs and peers already in the industry, with the ultimate goal of inspiring them to become the next generation of mineral exploration and mining development leaders themselves.

Speaking from the show floor at PDAC 2024, Holly Martin – an Indigenous industry peer now working with Alamos Gold – had this to say about engaging with other Indigenous youth at PDAC's Convention: "I can see it, especially in the young people's faces when they come up to my booth and I talk about where I come from and what I've done and what mining actually is. You see like, like the wheels turning. And I think that it removes the barrier – that education removes a barrier and opens a door for opportunity, which is absolutely critical if we want our youth in the North to make it." Speaking about the prospect of more Indigenous youths attending the Convention, Holly said, "To be here really would cement the idea that… this is a world they can be part of. It's a world that can uplift them."

To learn more about this opportunity, visit pdac.ca/indigenous-ambassador-program.

Acknowledging The Land

As the land acknowledgement statement on the inside cover of this magazine states, PDAC's staff are primarily located in Toronto, Ontario, on the traditional territory of the Mississaugas of the Credit First Nation, the Haudenosaunee, the Wendat, also known as the Huron, the Chippewa, the Anishnabeg and all other Indigenous nations that have lived on these sacred lands since time immemorial. While similar statements are commonly used by organizations in Canada, it is not a practice performed internationally. That is why PDAC's Indigenous Affairs Committee held discussions about how to, respectfully, bring global acknowledgement of the ancestral lands that PDAC's annual convention in Toronto is held on.

As the producer of the world's premier mineral exploration and mining convention, the association wanted to provide attendees an opportunity to recognize and understand where they stand when they visit Toronto. The decision was made to work with an Indigenous creator to produce artwork for a new land acknowledgement slide, with the slide being displayed in front of presentations at PDAC 2025.

Karly Cywink is the artist who will illustrate this important work, which will serve to allow both reflection and celebration of these historical lands.

Karly is an Ojibwe multidisciplinary artist originally from Manitoulin Island, and a recent graduate of Toronto Metropolitan University's RTA Media Production program. Now based in Toronto, Karly works in film, communications, design, and traditional illustration and painting. Her work is both a look at the past as well as forward-thinking, as evident in her documentaries that explore themes of Indigenous self-identity and self-determination in young adults. As an Indigenous artist, Karly aims to produce media that focusses on "sharing experiences and elevating the voices of others."

PDAC is honoured to work with Karly, who will bring her unique and traditional perspective to the land acknowledgment art piece, that aims to be representative of the communities, the land, and the priorities of Indigenous Peoples in Canada. The artwork will be unveiled at PDAC 2025 as an important inclusion to the presentations and opening remarks of various Indigenous Affairs Program sessions. Overlaid on Karly's art will be our full land acknowledgement text, providing an opportunity for attendees to see in writing the traditional names of the communities on whose land the Convention is hosted, and reflect upon the meaning of the statement and the lands that they call home.

Visit pdac.ca/indigenousaffairs to learn more about how our association continuously works to support the development of positive relationships between Indigenous communities and the industry.

“You see, like, the wheels turning. And I think that it removes the barrier – that education removes a barrier and opens a door for opportunity, which is absolutely critical if we want our youth in the North to make it.”

PDAC 2025

PDAC 2025 CONVENTION

THE AWARD-WINNING EVENT WILL BE HELD MARCH 2-5, 2025 IN TORONTO

> Since 1932, the Convention has grown not only in size and influence, but also in its ability to foster critical discussions, unveil cutting-edge innovations, and connect industry leaders from across the globe.
>
> **- Raymond Goldie**
> PDAC President

PDAC 2024 was one of the largest events in the association's 92-year history.

The following pages feature some exciting stats from PDAC 2024, plus information on the engaging exhibits, programming, events and networking opportunities that are in store for 2025!

First, here are some important dates for the upcoming world's premier mineral exploration and mining showcase:

Registration opens this December. pdac.ca/registration

The early registration deadline is February 7, 2025.

The deadline to purchase tickets online for the Awards Gala & Nite Cap, Breakfast Social, Lunch Social and Short Courses is February 21, 2025.
Onsite sales are subject to availability

1,105
EXHIBITORS
IN 2024

26,926
ATTENDEES FROM
138
COUNTRIES
IN 2024

693
PRESENTERS
IN 2024

SAVE THE DATE!
March 2-5, 2025
pdac.ca/convention

EXHIBITS

Spread over both the North and South Buildings of the Metro Toronto Convention Centre, PDAC 2025 will showcase another full slate of exhibitors from across the globe.

TRADE SHOW & TRADE SHOW NORTH

Visit over 600 exhibitors showcasing the world's leading technologies, products and services, and meet government representatives from across the globe. This includes the Northern Ontario Mining Showcase (NOMS) – largest pavilion at PDAC featuring over 110 exhibitors and interactive displays showcasing innovative products and services to help plan, build, maintain, and rehabilitate projects around the world!

CORE SHACK

Providing a unique venue for companies to display their core samples. Attendees can get up close to new or ongoing projects that are generating exciting drill results. The latest discoveries from all corners of the Earth will be featured along with maps, charts and technical information.

INVESTORS EXCHANGE

Discuss investment potential with 440 junior mining companies, mid-sized producers, major mining companies, financial institutions and prospectors to discover new business opportunities.

PROSPECTORS TENT

Get to the heart of the industry with a visit to the Prospectors Tent. Self-employed prospectors will be there to discuss their maps, samples and claim results.

STUDENT MINERALS COLLOQUIUM (SMC)

The SMC brings together geoscience students and industry professionals to highlight innovative student research on projects essential for the successful evolution of the modern mining industry.

Students (BSc, MSc, PhD) working on projects linked to mineral deposits including mapping, mineralogy, geochemistry, geophysics, environmental and hydrogeology have the opportunity to share their research with an audience of academics and industry professionals.

INDIGENOUS ARTISANS

An initiative aimed at showcasing the diverse work of talented Indigenous artists and artisans from coast to coast to coast.

To exhibit and for more information visit
pdac.ca/convention/exhibits

PROGRAMMING

The annual convention hosts a wide range of presenters, industry experts and facilitators offering their knowledge, strategies, new concepts, case studies and more.

CAPITAL MARKETS

Access to capital is the lifeblood of the mineral exploration industry. This program creates a forum for dialogue on a range of topics related to the financing of mineral exploration.

CORPORATE PRESENTATION FORUM FOR INVESTORS (CPFI)

This popular series features up-to-the-minute information on select exploration and development companies' current activities and investment potential. This series continues to be of strong interest to investors, highlighting the scope of commodities and stages of development represented at the convention, now including micro-cap companies.

EXPLORATION INSIGHTS

Exploration Insights will showcase research on new concepts and ideas relevant to our industry today. This series of high-profile technical and academic presentations will offer insight into current and topical subjects.

KEYNOTE PROGRAM

The Keynote Program features four themes designed to inspire and educate: commodity outlook, mining industry outlook, technology and innovation, and discovery of the year. Presenters will discuss new and exciting concepts and explore the compelling challenges of mineral exploration and development in 2025. The premium lineup includes Mike Henry (BHP), Flavia Tata Nardini (Fleet Space Technologies), and the Thayer Lindsley Award recipient.

INDIGENOUS PROGRAM

Uncover the fundamentals of building cooperative, respectful and mutually beneficial partnerships between Indigenous communities and the minerals industry. This program brings Indigenous-owned companies, communities and individuals together with industry representatives to share experiences, exchange ideas and network. Indigenous leaders, industry experts and legal professionals share their visions of prosperity and reconciliation with PDAC's global network.

INVESTMENT LEADERS FORUM

Top newsletter writers and other professionals who inform investment decisions in the mining industry gather at this session to present their thoughts, charts, research reports, and ideas on the criteria they use to select profitable investments in the resources sector.

MASTER CLASS SERIES

Learn from industry leaders as they share key insights and case studies throughout this exclusive series of presentations.

SHORT COURSES

These are in-depth educational sessions led by presenters with expertise in a variety of different subject matter. Sessions range from a half-day to two days in length.
Short courses are ticketed – purchase online before they sell out!

STUDENT & EARLY CAREER PROGRAM

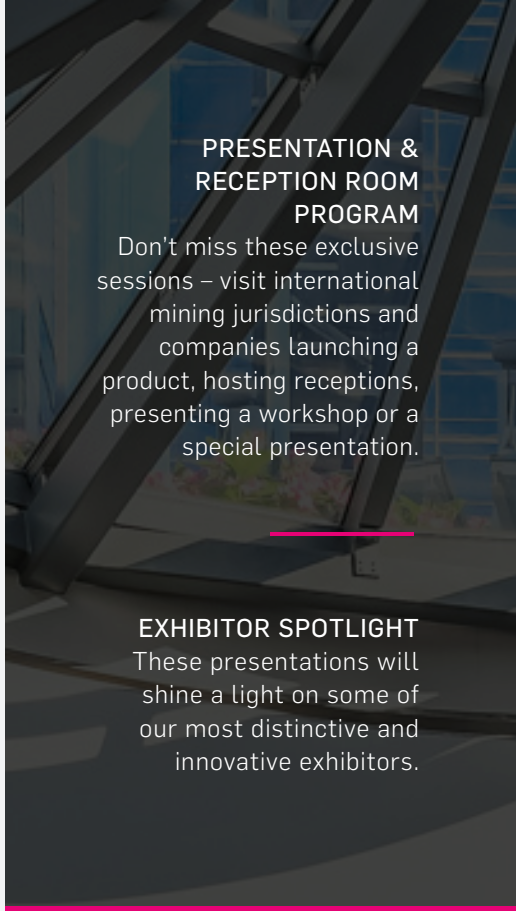
This program allows students and early-career individuals an unrivalled opportunity to connect with industry professionals from around the world. Learn about the diverse range of careers and attend engaging presentations to stay up to date on exciting industry developments.

SUSTAINABILITY PROGRAM

Join a facilitated multi-stakeholder dialogue and peer learning on key issues related to responsible exploration and mining. This program features presentations and conversations that examine the innovative ways in which mineral exploration and mining companies are working to improve their sustainability. Both challenges and successes will be presented, as well as lessons learned.

TECHNICAL PROGRAM

Industry experts discuss current and emerging trends, technologies, research and analysis in a dynamic series of presentations. Presenters share their practical experience, insights and a look to the future. Topics include commodity outlook, critical minerals, geophysics, decarbonization, technology and more.



PRESENTATION & RECEPTION ROOM PROGRAM

Don't miss these exclusive sessions – visit international mining jurisdictions and companies launching a product, hosting receptions, presenting a workshop or a special presentation.

EXHIBITOR SPOTLIGHT

These presentations will shine a light on some of our most distinctive and innovative exhibitors.

For more information on the engaging programming scheduled for 2025, visit pdac.ca/convention/programming

Events and programming are subject to change.

EVENTS & NETWORKING

Don't miss these valuable networking opportunities!

OPENING CEREMONIES
Join Raymond Goldie, PDAC President and other special guests as we mark the official opening of the 2025 Convention.

THE NETWORK
Join us for an unforgettable evening of networking at the iconic Fairmont Royal York Hotel. This is your chance to roll the dice and connect with prospectors, decision makers, consultants, geoscientists, international government representatives and students, while indulging in the excitement of a mock casino. We provide the chips for you to play Blackjack, Roulette, Texas Hold'em and more.

CAFFEINATION STATION | NEW FOR 2025
Be one of the first 1,000 attendees daily and receive a free coffee or tea as you stroll and visit Trade Show North exhibitors.

BREAKFAST SOCIAL | NEW FOR 2025
Fuel up for your busy day at the Convention at the PDAC's first-ever networking breakfast. Meet with new and old friends, potential investors, clients, and suppliers. Buy a ticket and join an open table or purchase a reserved table of 10 (with company name) and entertain guests.

LUNCH SOCIAL | NEW FOR 2025
Skip the lunch lines and join us at the PDAC's buffet Lunch Social. Looking for investment opportunities, professionals to collaborate with, or are you a recent graduate looking for work? Enjoy casual socializing and networking with friends and colleagues. Buy a ticket and join an open table or purchase a reserved table of 10 (with company name) and entertain guests.

COFFEE CONNECTIONS
Join us for a complimentary coffee to start your day right, and chat with attendees and exhibitors.

HAPPY HOURS
Enjoy a beverage as you network with exhibitors and attendees from around the world.

PDAC ONE-ON-ONE MEETING

In partnership with Precious Metals Summit Conferences, PDAC offers professionally organized one-on-one meetings, which bring qualified investors together with companies' senior management. This exclusive program is offered only to a select group of confirmed Investors Exchange and Core Shack exhibitors, carefully screened, qualified investors and portfolio managers from around the world.

MINING FOR DIVERSITY

Women in Mining Canada (WIMC) is pleased to host this annual awards ceremony and networking event. Celebrate the Trailblazer Awards Series winners, and network with other industry professionals.

STUDENT-INDUSTRY MIXER

This event provides an opportunity for students, early-career and industry professionals to network in a relaxed environment. The recipient of the Mary-Claire Ward Geoscience Award and the 2025 Student-Industry Mineral Exploration Workshop (S-IMEW) participants will be announced. Student members will be entered into a draw to receive one of five $500 tuition top-up awards. Student members from Canadian post-secondary institutions can apply for travel funding to help cover the costs of getting to Toronto. For more information, visit: pdac.ca/students/pdac-convention-2025.

AWARDS GALA & NITE CAP

The PDAC Awards Gala & Nite Cap is an unparalleled evening of sophistication and celebration, steeped in tradition and prestige at the illustrious Fairmont Royal York Hotel. This distinguished event is a tribute to the finest achievements in the global mineral exploration and mining industry. It's designed to impress and connect, as we present the coveted PDAC Awards to deserving recipients. Enjoy a chic cocktail reception, and a gourmet dinner paired with fine wines, followed by the presentation of the PDAC Awards and the exclusive Nite Cap. Lavish deserts, a welcoming host bar, and your opportunity to meet this year's Award Recipients, PDAC past Presidents, international delegations and global mining leaders await you at the Nite Cap. Tickets sell quickly so be sure to buy online with your registration.

CANADA NIGHT FINALE

Celebrate in true Canadian style! After four days of intense networking and exploration, it's time to kick back and create some unforgettable memories. This is your last chance to connect with exploration and development professionals from around the globe. Guaranteed you're in for a night of networking, relaxed vibes, and pure Canadian fun.

Don't miss the opportunity to meet fellow PDAC members and play an important role in guiding the association's future at the **Annual General Meeting**.

PDAC 2025 will also host a number of invitation-only events, including the **PDAC New Members Networking Reception**, **Life Member Luncheon**, and **S-IMEW Alumni Reception**.

For a comprehensive list of PDAC 2025 events and networking opportunities, visit pdac.ca/convention/events-networking

Events and programming are subject to change.

SPONSORS

PDAC would like to thank all of our Convention sponsors for their valued contributions and support.

Limited sponsorship and marketing opportunities are still available for PDAC 2025: The World's Premier Mineral Exploration and Mining Convention.

Maximize your brand exposure with targeted digital, print, and experiential marketing campaigns that will help your company stand out from competitors. Reach over 25,000 attendees from more than 130 countries, including key influencers and decision-makers from the banking, investment, government, mining, and education sectors.

For more information, visit pdac.ca/convention/sponsors/opportunities.

MEDIA ACCREDITATION

PDAC provides no-cost accreditation to professional journalists who cover the mineral exploration and mining industry and/or capital markets for print, broadcast and online media. Apply today by visiting pdac.ca/convention/attendee-info/media/accreditation.

VOLUNTEER OPPORTUNITIES

Save money and network with industry professionals at the convention! Volunteer your time in exchange for a complimentary All Access Pass, volunteer apparel, food vouchers, a gift card and a volunteer certificate. Visit pdac.ca/convention/attendee-info/volunteers to apply today.

PDAC 2025
SAVE THE DATE!
MARCH 2-5, 2025
REGISTRATION OPENS
THIS DECEMBER!
INFORMATION
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Sponsor

CHARTING THE FUTURE WITH S-IMEW 2024

FROM MAY 1 TO 16 IN SUDBURY, ONTARIO, PDAC WAS EXCITED TO CELEBRATE THE 15TH ANNIVERSARY OF THE FLAGSHIP PROGRAM: THE STUDENT-INDUSTRY MINERAL EXPLORATION WORKSHOP (S-IMEW).

S-IMEW was developed in 2007 with the goal of providing a comprehensive field-based opportunity for top Canadian geoscience students to learn about the exciting array of career opportunities in the mineral exploration industry.

We are proud to have welcomed 384 students, including 177 women, through 15 workshops. This year's group was comprised of 26 students, including a record high of 22 women. We are also proud to have numerous alumni who have gone on to have successful careers in the industry, some of whom now return each year as S-IMEW presenters.

Based out of Collège Boréal, students gained invaluable hands-on experience through regional geology tours with local geologists, geophysical survey demonstrations with Vale and Abitibi Geophysics, geochemical sampling exercises with the Geological Survey of Canada and the Ontario Geological Survey, regional and exploration mapping with the Ontario Geological Survey and NorthX Nickel, as well as a full day with the Glencore exploration team that included a drill site visit and mineral estimation exercises. The field days were complemented by in-class presentations on important subjects such as mineral economics, ESG, Indigenous participation in exploration, capital markets, resource modelling and interpretation of data.

A highlight of the annual workshop continues to be the four-day field trip. This year, the students travelled to Val-d'Or, Quebec, where they explored VMS deposits in the Abitibi Greenstone belt. Here they also gained exclusive access to core shacks at Winsome Resources where they saw pegmatite drill core, and some incredible visible gold at Wesdome Gold Mines, where they also learned about the geology of those projects. A memorable activity during the field trip was the opportunity for the students to go underground at the Agnico Eagle Goldex and Eldorado Gold Lamaque mines.

In addition to the hands-on, practical skills the students gained throughout the two weeks, they were also given opportunities to network with more than 90 industry experts and leaders from the mineral exploration and mining sector each evening at dinner, and at larger events such as the Welcome Reception and the S-IMEW Finale Dinner.

To celebrate this milestone anniversary, we asked S-IMEW 2024 student participants, as well as the outgoing and incoming S-IMEW co-chairs about their experiences from the program and the invaluable memories, opportunities and insights this annual workshop delivers.

Djelika Sogoba

University of Manitoba

What made you want to pursue geoscience, and how did you hear about S-IMEW?

I chose geology as a potential career through a process of elimination during my final year of high school. It wasn't a particularly sentimental choice, nor did it carry any significant personal meaning at the time. Having pursued experimental sciences, I knew I wasn't interested in medicine or any biology-related fields. It was then that my father reminded me of geology, a subject I had come to appreciate after completing a presentation on volcanoes. He recalled how much I enjoyed researching the topic and sharing my findings with classmates, and how fascinated I was by the subject itself. Reflecting on that, I decided to pursue geology, and I have never once regretted that decision.

| Was there anything about geoscience, mining or exploration you never knew/would not have known before attending S-IMEW?

The S-IMEW program was highly beneficial to me, offering not only theoretical knowledge but also practical insights into the mining and exploration industry. I learned about the importance of technology in mapping, and the roles that geophysics and geochemistry play, as well as the various stages involved in the mining cycle. I particularly enjoyed the day we explored the legal aspects and different policies that must be considered in mining operations. It broadened my understanding of how mining is not solely about the science, but also requires careful navigation of regulatory frameworks, environmental stewardship, and community relations.

| What would you say is your favourite memory/ experience from the two-week workshop?

One of the highlights of my experience was the visit to the Eldorado Gold mine in Quebec, which was both educational and enjoyable.

| Where would you like to see yourself in the industry in five years?

In five years, I envision myself actively applying the skills I've acquired through my bachelor's and master's degrees to contribute meaningfully to the mining sector.

Louis-Philippe Beaulieu

University of Regina

| What made you want to pursue geoscience, and how did you hear about S-IMEW?

Like my friends and school peers, I did not know which path to take post-secondary. Throughout high school, I never knew geoscience existed and that it was an exciting career filled with possibilities. It was not until around the end of grade 12 that I learned about geoscience. My university, the University of Regina, came to my high school with many departments and faculties, including the Department of Earth Sciences. At the department booth, I specifically remembered that what attracted me to geoscience was the possibilities of traveling, exploring, and working in the field. These attracted me because I always loved camping, canoeing, and being outside. Moreover, I had a curiosity for science. In the department booth, I realized all my hobbies and interests can be applied to that career.

With no hesitation, I registered for a major in geology, started my first geology courses, and started my first summer job, all in one year! I loved it and knew that this was the perfect path for me. And I never looked back. Further into my degree and by working with mining companies in my summers, I started to understand the importance of mineral deposits and mineral exploration for my province, Canada, and the world. I quickly got curious about the field of exploration geology, and I wanted to excel and acquire skills in that field. Around that time, I heard of S-IMEW through a university colleague who participated in 2023. She told me it was a fun and great opportunity and that she learned a lot about the mining industry and exploration, which I was exactly looking for. I did not hesitate, and I applied for S-IMEW 2024. I got selected successfully and am grateful for such a great opportunity that will benefit me in my career.

| Was there anything about geoscience, mining, or exploration you never knew/would not have known before attending S-IMEW?

It is hard to list everything I have learned in S-IMEW since we learned a lot of concepts about the industry! However, one thought-provoking piece of information motivated me more to become an exploration geologist. The thought-provoking information was about the current high gap between the discoveries of new deposits and the amount of money spent on exploration. We also learned that there are currently more brownfield exploration projects than greenfields, which is unfortunate since those projects have contributed more to past

deposit discoveries despite their high risk. I would have never known this before entering the industry. I see it as a space for opportunity and growth for us as the future generation of geoscientists to further push for more greenfield exploration and refine our techniques for future deposits discoveries that we need in our society.

| What is your favourite memory/experience from the two-week workshop?

My favourite memory of S-IMEW is visiting the town of Val-d'Or in Québec. We had the fantastic opportunity to see the gold mines in the area and learn the geology of the region of Abitibi, which had incredible outcrops of greenstone belts, and komatiite flows with spinifex textures. It was insightful to see these geological features in real life! I had the chance to visit Lamaque Mine by Eldorado Gold, which was my first time going underground. The experience was surreal. It showed me what it would be like working underground as a beat geologist or mine geologist if I ever want to change my career path. It was also interesting to see all the technologies and infrastructure found in a mine and how sophisticated it is.

| Where would you like to see yourself in the industry in five years?

In five years, I would like to work as an exploration geologist for a junior company in Saskatchewan with a completed and approved Professional Geoscientist license (P.Geo). Further down my career, I would like to work in greenfield explorations in South America, in the Andes.

David Murray

S-IMEW Co-chair

| As a S-IMEW alum, was there a particular skill or knowledge base you acquired from the program that you wouldn't have otherwise, that you've been able to apply directly to your career?

For me, a comprehensive introduction to exploration geophysics was a hole in my post-secondary education. The Geophysics Day at S-IMEW offered a hands-on primer to several common geophysical exploration methods. With the guidance of subject matter experts, I gained a working knowledge of their applications and limitations. This was a significant breakthrough for me and something that could have taken years to acquire organically in my career. Beyond the technical aspect, the greatest learning opportunity was a crash course in the business of mineral exploration. Understanding the financial mechanisms that fuel exploration was a unique opportunity that S-IMEW exclusively provided.

| Do you have a personal favourite memory/experience from your time as a student attending S-IMEW?

Reflecting on my time at S-IMEW, the standout element is undoubtedly the people. It's almost indescribable how empowering it is to commence your career with a robust network of over 20 peers from across the country. This network provided an unparalleled jump-start that few other experiences could offer.

| Are there other students you attended S-IMEW with that are also now working in the industry?

The ever-growing 300+ S-IMEW alumni form a distinguished and accomplished network. Among my cohort, those who opted to remain in the industry have climbed the ranks to hold senior technical or management positions in both junior and major companies. Others have transitioned into adjacent industries or governmental roles. In an industry known for its challenging beginnings, S-IMEW alumni are gaining a reputation for achieving rewarding career outcomes.

| What is one piece of advice you would give to students who may be thinking of a career in geoscience or exploration?

Explore your options. Mineral exploration is a vast field with a spectrum of disciplines contributing to its success. There are unlimited opportunities to participate, regardless of your interests or skills,

> “Throughout high school, I never knew geoscience existed and that it was an exciting career filled with possibilities.”
>
> **- Louis-Philippe Beaulieu**
> University of Regina

> The S-IMEW program was highly beneficial to me, offering not only theoretical knowledge but also practical insights into the mining and exploration industry.
>
> - **Djelika Sogoba**
> University of Manitoba

where you're from, or where you aim to go. The industry offers both rewarding and challenging opportunities for everyone.

| What is your vision for the future of S-IMEW?

For the next chapter of S-IMEW, I envision an initiative where students integrate their learnings from various disciplines of mineral exploration into a comprehensive exercise. This approach would introduce them to a mineral systems perspective on exploration. I want them to not only learn about exploration but understand how to explore—utilizing a combination of methods, tools, and technologies to identify favorable geological settings, evidence of ore-forming processes within them, and delineate deposits.

Felix Lee

Outgoing S-IMEW Co-chair

| As co-chair of the S-IMEW Planning Committee for the last 15 years, how would you describe the evolution of S-IMEW since its inception?

As co-chair of the S-IMEW Planning Committee for the last 15 years, I've had the privilege of witnessing the tremendous evolution of the S-IMEW workshop. Since its inception, the workshop has not only grown in scope but also in relevance, reflecting the increasing awareness and knowledge of the mining and mineral exploration industry among geoscience students across the country. What began as a foundational introduction has transformed into a platform where more advanced and complex discussions can take place, mirroring the students' elevated understanding of the industry.

Over the years, we've had to adapt the workshop's content and presentations to keep up with this heightened level of student awareness. This has allowed us to delve into topics in greater detail than was possible in the early years, or cover areas that were previously out of reach due to the limited exposure students had to the industry back then. Today, we are able to explore more specialized aspects of geoscience, mining, and exploration, enriching the learning experience for all attendees.

Perhaps the most significant change, and one I'm particularly proud of, is the fact that many S-IMEW alumni have returned to the workshop as presenters and organizers. These individuals, who first attended the workshop as students, are now leaders in their own right, contributing back to the very initiative that helped shape their careers. In fact, the new chair of the S-IMEW Organizing Committee, David Murray, is a proud S-IMEW alumnus. This alumni involvement is a testament to the lasting impact S-IMEW has had on participants and the growing legacy it continues to build within the industry.

| What highlights come to mind when reflecting on your involvement with S-IMEW?

Reflecting on my involvement with S-IMEW over the years, there are so many highlights that it's hard to know where to begin! Each workshop has left a lasting impression, whether it's the quality of discussions, the breakthroughs students have had, or the evolving relevance of the topics we cover. But if I had to pick, perhaps the greatest reward for me, and the reason why S-IMEW stands out as my favorite of all the work I've been involved with at PDAC, is the many friendships I've developed with S-IMEW students over the years.

It's incredibly fulfilling to meet these bright, passionate individuals when they first attend S-IMEW as students and then follow their journeys as they enter the industry and grow in their respective careers. Many of them have gone on to make significant contributions to mining and exploration, and it's been a privilege to witness their progress firsthand. This continuity, from seeing their potential early on to watching them thrive, is truly special and has made my involvement with S-IMEW a deeply rewarding experience.

| What role does S-IMEW play in helping the mineral exploration and mining industry develop its talent pipeline?

S-IMEW plays a critical role in helping the mineral exploration and mining industry develop its talent pipeline. Originally conceived to introduce Canadian geoscience students to the many facets of our industry, the workshop was designed to broaden their awareness of the diverse career opportunities that exist within mining and mineral exploration. By offering this broad introduction to the industry, we aim to spark students' interest and open their eyes to career paths they may not have previously considered.

One of the key strengths of S-IMEW is the opportunity it provides for students to engage directly with industry professionals; interactions that allow students to gain insight into real-world practices and learn about aspects of the industry they typically wouldn't encounter in a traditional academic setting – especially areas like the business side of mining and exploration, which are vital but often missing in geoscience curricula.

Ultimately, the end goal of S-IMEW is to inspire geoscience students to pursue careers in mining or mineral exploration, helping to ensure that the industry continues to benefit from a steady influx of knowledgeable, passionate young talent. By nurturing this connection, we are investing in the future of the industry and creating a pipeline of skilled professionals ready to tackle the challenges and opportunities ahead.

S-IMEW 2025 will be held April 30 to May 15.

To take part, geoscience students must be nominated by their departments. Each Geoscience department in Canada can nominate up to two students. To learn more about the workshop, and access the 2025 nomination package, please visit pdac.ca/s-imew.

“By nurturing this connection, we are investing in the future of the industry and creating a pipeline of skilled professionals ready to tackle the challenges and opportunities ahead.”
- **Felix Lee**
Outgoing S-IMEW Co-Chair

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MARY-CLAIRE WARD GEOSCIENCE AWARD 2024

For over two decades, PDAC has been encouraging and supporting geological mapping in Canada through the Mary-Claire Ward (MCW) Geoscience Award. Mary-Claire was a strong supporter for the geosciences in Canada.

This award proudly continues her legacy of advocating for mapping programs that aim to strengthen our nation's geological knowledge base, encouraging greater investments in the mineral exploration industry. The $5,000 annual cash prize is given to a full-time graduate student who's thesis is likely to increase our knowledge of the geological history of Canada.

The MCW Geoscience Award recipient for 2024 is Ludovico Scorsolini from the University of Waterloo.

Ludovico's research aims to better identify key structures and the tectonic evolution of the Baie Verte Peninsula N.L. in order to guide exploration in this increasingly important mining area.

This engaging Q&A reveals how Ludovico began his career, what the award means to him and the future of the field.

> In recent years, more opportunities have emerged for students to connect with industry professionals and attend workshops on emerging research technologies.

| What attracted you specifically to the field of geoscience?

My interest in geosciences began as a child, inspired by the stories my grandfather shared about his time working in the mining industry in Africa. His tales of distant lands, diverse cultures, breathtaking landscapes and dangerous journeys captivated my imagination. He would often show me rock and mineral samples from his travels, sparking my curiosity. I remember wondering, "How could nature create something so unique?" It was then that I began to see geoscience as a world filled with adventure, discovery and wonder.

As I grew older, my fascination deepened through science books, high school studies and travels. A turning point came during a trip to the United States when I saw the monumental views of the Grand Canyon. That experience solidified my decision to pursue university studies in geology. I believe that one of the most fascinating aspects of geosciences is the chance to explore processes that operate on completely different scales of time and space than we typically experience, giving us a deeper connection to the very heartbeat of our planet.

| What did receiving the MCW Geoscience Award mean to you?

Receiving the MCW Geoscience Award represents a meaningful acknowledgment of the significance of my research by a prestigious scientific committee, beyond my study group and collaborators. Graduate students often work under high expectations in a competitive environment, and while this invaluable experience shapes our professionalism, the challenges we face can sometimes whittle our confidence. For me, receiving this recognition reaffirms that genuine effort and dedication are always rewarded. This award has become an incredible source of encouragement, boosting a positive outlook on my future in research.

| As the focus of the MCW Award is on mapping, where did you develop your mapping skills, and how important was mapping to your thesis?

I developed my mapping skills primarily during my master's thesis project at the University of Milan and my PhD project at the University of Waterloo. At the University of Milan, I studied the structural and metamorphic evolution of the Mont Mary Unit – a continental unit exposed in the Western Italian Alps. This research involved field mapping in wonderful Permian high-temperature units that were later reworked and juxtaposed by high-pressure shear zones during the Alpine orogeny.

During my PhD at the University of Waterloo, I worked on a field-based project aimed at reconstructing the tectonic history of an Early Paleozoic Laurentian margin segment, which recorded subduction and exhumation during the Taconic Orogeny, preserved in the Baie Verte Peninsula, N.L. This region experienced a complex, polyphase tectonic history during the Appalachian and older orogenies, with rocks showing superimposed deformation events across an exceptionally wide range of metamorphic conditions.

Field mapping was essential for identifying areas that preserved older structural and metamorphic patterns, as well as areas where later overprints were more developed. Extensive fieldwork was fundamental in designing successful sampling and analytical strategies, which ultimately allowed me to achieve my research objectives.

| How do you feel the regional scale mapping you have conducted in the field during your thesis contributed to the knowledge of Canada's geological history, and how do you see this knowledge supporting the mineral sector?

The Canadian Appalachians is one of the world's classic orogenic belts, where research has been driven by both scientific interest and the evaluation of natural resource potential. While the broader tectonic framework of this Paleozoic orogen is relatively well-understood, significant questions remain, particularly concerning the processes that shaped some key tectonic events, such as the evolution of the Taconic Orogeny.

Regional-scale geological mapping plays a fundamental role in addressing these knowledge gaps. It is essential for identifying domains that record different phases of deformation and metamorphism in the field, which in turn guides more targeted petrological and geochronological studies. This approach enhances our understanding of the complexities within the orogen and provides a more detailed view of its tectonic evolution.

The Baie Verte Margin is an active target for gold exploration, with its geological setting analogous to other highly prospective regions, such as the Dalradian belt in the Northern U.K. Caledonides. The structural, petrological, and geochronological data acquired through my research, along with the new tectonic models produced, could be valuable to the mineral industry by offering a deeper understanding of the genesis and spatial distribution of potential gold targets. Specifically, the identification of key structures and the tectonic evolution of the Baie Verte Peninsula could help guide exploration efforts and inform resource assessment strategies in this increasingly important mining region.

| Do you think there are enough resources dedicated to teaching geoscientists about the importance of mapping?

While the importance of mapping is recognized and often emphasized by professors, I believe there are not enough resources dedicated to teaching geoscientists about its critical role, especially when it comes to practical field experience. Although the theory behind mapping can be explained in the classroom, it is best understood through hands-on practice in the field. However, it seems that many universities are offering fewer field schools. This trend – which appears to be widespread – results in students spending less time in the field as part of their standard coursework, especially at the undergraduate level.

Most students only gain significant mapping experience during their thesis research projects, but introducing this earlier in their academic journey could greatly benefit their development as geoscientists.

| As a graduate student, are there any tools or programs that you see in place now for students/early graduates that you wished were in place when you first started?

One area where I see significant improvement is in the availability of programs aimed at professional development and networking for graduate students

and early-career geoscientists. In recent years, more opportunities have emerged for students to connect with industry professionals and attend workshops on emerging research technologies. These programs are very useful for gaining insights into the practical applications of research and building connections within the geoscience community.

What advice would you give to high school students looking at geoscience as a possible career?

As a high school student, I remember that it wasn't entirely clear what a geoscientist's job involved. Geosciences is a broad field, covering many different topics and career paths, which can make it difficult to fully understand at first. While enthusiasm for the science and the learning process is important, I would advise high school students to take time to explore the various career options within geoscience. This could involve talking to current students, attending open days, speaking with professors and professionals, and researching the wide range of jobs available in the field.

Discovering the many career possibilities related to geosciences is a long process – one that I'm still experiencing myself. However, gathering information early on can help you make a more informed decision when considering geoscience as a career path.

What is the most exciting development you've seen in the field of geoscience? This could be something you've encountered yourself, or something from the past that has always fascinated you.

One of the most fascinating developments in the field of geoscience, for me, is the discovery of global lead contamination as a result of burning leaded fuel. This came to light in the 1960s when scientists were developing methods to analyze minerals for U-Pb dating. In particular, Clair Patterson, a geochemist, was trying to determine the age of the Earth by measuring lead isotopes in zircon crystals. He found that the lead contamination was far greater than expected, not just in his laboratory but globally.

This unexpected finding led Patterson to investigate the source of the contamination, eventually tracing it back to the widespread use of leaded gasoline. His work has raised awareness about the dangers of lead pollution, and played a key role in the campaign to phase out leaded fuel worldwide.

This discovery has always fascinated me because it highlights the deep interconnection between geoscientific research and broader societal issues. What began as an attempt to refine a dating technique for geological purposes ended up exposing a major public health and environmental hazard. It's a perfect example of how science often intersects with other aspects of society in unexpected ways.

Do you have a five- or ten-year plan for what you'd like to be doing, or have achieved with your work?

In the near future, my goal is to further develop my skills both in research and the industry, through my current role at the Geological Survey of Newfoundland and Labrador. I aim to establish a research group that works on international projects both in Canada and abroad. I also want to actively engage with students – whether by mentoring them as field assistants or collaborating on thesis projects – to help foster the next generation of geoscientists.

Over the next five to ten years, I hope to have contributed to both pure science and its practical applications in the industry, while working with a positive and dynamic network of collaborators. Equally as important, I would like to support students and collaborators in achieving their goals, just as I was guided and mentored throughout my own journey.

The MCW Geoscience Award is administered by the Geological Association of Canada (GAC), the Prospectors & Developers Association of Canada (PDAC), the National Geological Surveys Committee (NGSC), the Canadian Geological Foundation (CGF), and Watts, Griffis and McOuat Ltd. (WGM). Mary-Claire Ward was a former chair of PDAC's Geoscience Committee, chairperson of Watts Griffis and McOuat Ltd., and a Past President of the Geological Association of Canada. To learn more about this and over a dozen other student awards, bursaries, scholarships, and funding opportunities available through PDAC, visit pdac.ca/financialsupport.

“
It was then that
I began to see
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world filled with
adventure, discovery
and wonder.
”

PDAC'S PHOTO CONTEST FINALISTS REVEALED

In August, PDAC launched an exciting photo contest inviting our members to showcase their fieldwork experiences through captivating images. The response was overwhelming, with over 100 stunning submissions received from across Canada and around the world, each reflecting the dedication and passion of our industry.

All entries were carefully reviewed to ensure they aligned with our criteria, which emphasized the themes of exploration and health and safety best practices.

Our PDAC committees played a pivotal role in selecting the top four favorites. As the field season winds down, we are thrilled to introduce the finalists of first, second, and third place, along with an honorable mention.

FIRST PLACE | Chris Brown

Mu Li examining core at Contango Ore's Johnson Tract project in Alaska. Iliamna Volcano (10,016ft/3,053m) is in the background with steam rising from a fumarole near its summit.

SECOND PLACE | William Feres

A mine geologist using his compass to survey linear features on Archean Gold-bearing Banded Iron Formations from Pilar Mine, Iron Quadrangle, Brazil.

MSA
MSA

THIRD PLACE | Franz Spachtholz

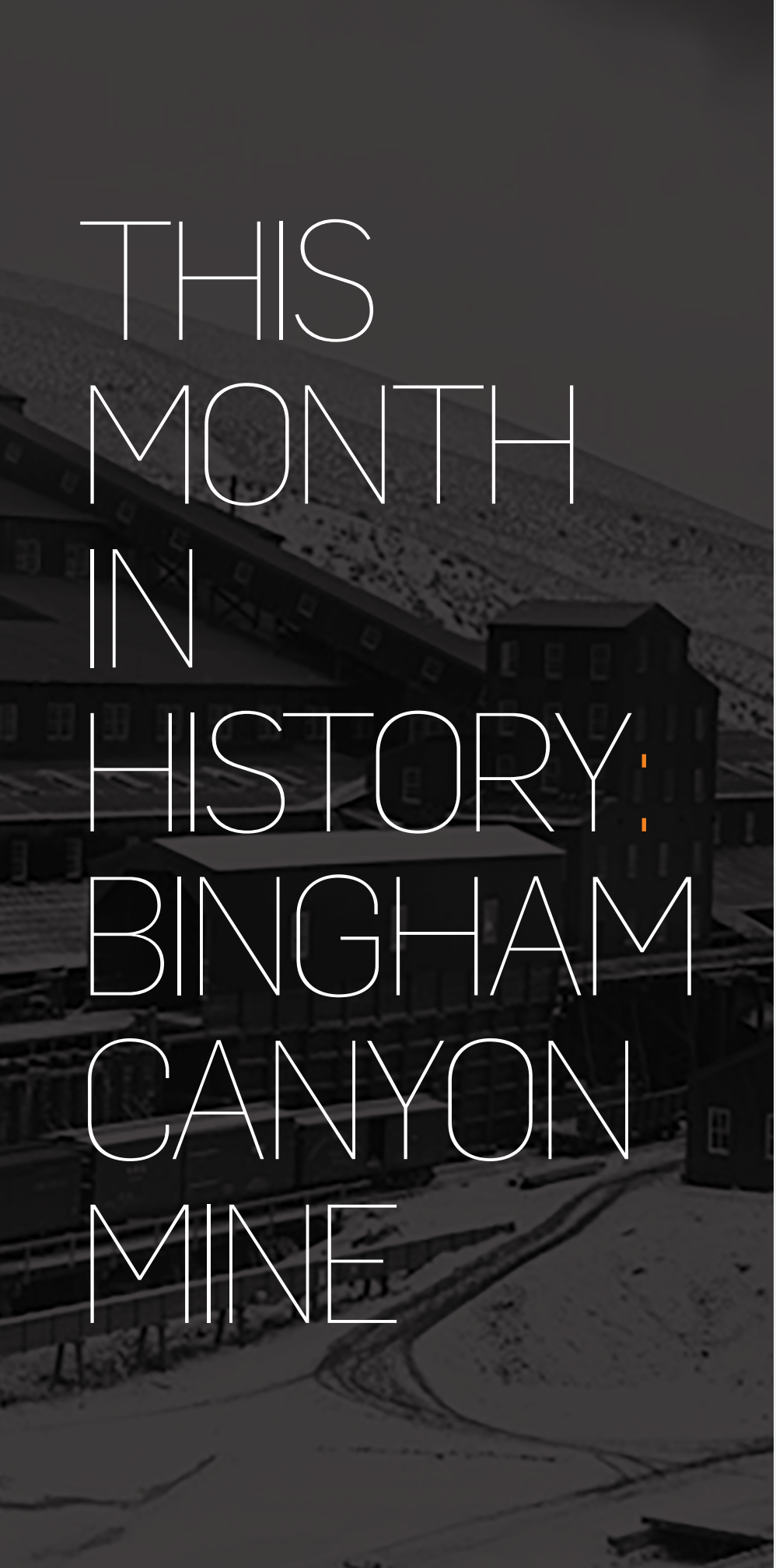
Baymag Inc., Mount Brussilof Mine,

Fueling Exploration: A helicopter long lines fuel to a remote diamond drilling rig, high in the mountains atop the magnesite bearing formation.

HONOURABLE MENTION | Juan Huamán
The Element 29 Resources geological team finishing a long day of geological mapping and sampling on the Elida porphyry Cu-Mo-Ag deposit in central Peru.

The remarkable contribution of each finalist serves as a reminder to our community of the beauty that exists in our day-to-day work within the mineral exploration and development sector.

Aside from being featured here in the pages of *CORE* magazine, recognition on PDAC's social media channels, and an exclusive PDAC swag package for all four finalists, the prizes also include a complimentary three year membership for first place, a complimentary two-year membership for second place, and a complimentary one-year membership for third place.



THIS MONTH IN HISTORY: BINGHAM CANYON MINE

To the average person not familiar with the mining development process, the visual scale of an excavation project can be overwhelming. But did you think that one could be so massive, that it can be seen from space?

Owned by Rio Tinto Group, and operated by the Kennecott Utah Copper Corporation, the Bingham Canyon Open Pit Copper Mine (also known as the Kennecott Copper Mine) is the world's deepest open-pit mine. And in the month of November, 1966, the U.S. National Register of Historic Places named it as a National Historic Landmark.

Copper, a key element in renewable and green technologies, is primarily used for power and energy transmission due to its excellent conductivity. This efficiency reduces the energy required for generating and delivering electricity, leading to lower CO2 emissions. As a result, copper is the material of choice for solar, hydro, thermal, wind, and photovoltaic energy systems.

The Bingham Canyon Mine has produced more copper than any other mine in history, and it remains one of the world's top copper producers.

In the Beginning

Almost two centuries ago, in 1847, several different kinds of ores were spotted near the Oquirrh Mountains in Bingham Canyon, just south-west of present-day Salt Lake City in Utah. Bingham Canyon received its name after one of the first families that settled in the region. Brothers Sandford and Thomas Bingham, while grazing their cattle, brought ore samples they had discovered to the leader of their family's settlement. The brothers suggested they stake a claim on the land where they brought the ores from. However, their leader is said to have refused to give the brothers permission to seek mining in the canyon, noting it was where the settlement's cattle grazed. They did not want to jeopardize the growth of their newly-founded community by excavating their herd's food source. A few years later though, in 1850, the Bingham family moved away. The canyon settlement kept the Bingham name, but quickly saw an influx of claims for excavation. By the early 1870's, almost three dozen claims had been staked, and the region saw various grades of gold, silver and lead being mined.

In 1873, a new railroad finally reached the canyon, and with it the excavation of a porphyry copper deposit began. (Porphyry coppers are typically large deposits.) With the new railroad, companies were able to greatly increase the scale of mining ore for processing off-site. Then in 1903, the Utah Copper Company began construction of a mill right outside the canyon at Copperton, and began full open-pit mining operations in 1906. At the time, with the adjacent railroad, open-pit excavation and 'new' steam shovel capabilities, the industrial complex defined by the Bingham mine and its associated smelting operation made it the "largest industrial mining complex in the world" by 1912.

Today, having been operational for almost 120 years, the open-pit mining activity has created an excavation over 1.2 kilometres deep (which is taller than two Empire State Buildings) and four kilometres wide. With this, the Bingham Canyon mine joins the Great Wall of China, Egypt's Great pyramids at Giza, and the Palm Island in Dubai as one of the few man-made structures visible to the naked eye from the orbiting International Space Station (ISS).

Having An Impact

The Bingham Canyon Mine has faced its share of environmental challenges over its century-long existence. In 1904, sulfur dioxide emissions from smelters caused crop failures, leading to lawsuits and the closure of several smelters. In the 1990s, elevated levels of selenium and arsenic were discovered in the soil of nearby residential areas. This led to a memorandum of understanding between Kennecott, the U.S. EPA, and the Utah

Department of Environmental Quality (UDEQ) to clean up the affected areas. Since 1995, Kennecott has invested over $400 million in reclamation efforts, restoring over ten thousand acres of land to date.

In 2013, the mine's seismic system successfully predicted one of North America's largest non-volcanic landslides, giving workers ample time to evacuate before the disaster struck. In recent years, Kennecott has focused on reducing its environmental impact, shutting down its coal-fired plant in favor of renewable energy sources such as solar and wind – reducing over 1 million tonnes of CO2 emissions. The mine's efforts also include piloting underground battery electric vehicles to reduce emissions and improve worker safety, and a $10 million combined heat and power system that can generate up to fifty percent of the energy needed to run its refinery as clean, carbon-free electricity.

Additionally, the site is using innovative ways to reduce its material waste. Through these efforts and its decades of work to employ better sustainability and responsible practices, Kennecott became the first copper producer in the world to be awarded the Copper Mark – the mining industry's first (and only) independent assurance program that uses over 30 criteria to determine whether an operation employs responsible environmental, social and governance practices. In addition to the Copper Mark, Bingham Canyon has been awarded the Molybdenum Mark, another independent certification that recognizes the site's responsible production of molybdenum as a by-product. Molybdenum is a necessary element for clean energy technologies and new, sustainable construction materials.

Today, the Bingham Canyon Mine not only holds the title of the world's deepest open-pit mine, but it also boasts one of the lowest carbon footprints of any copper producer in the U.S. Its long history showcases a pioneering industry adapting to ecological challenges, embracing responsibility, and leading the way in sustainable mining practices through reclamation, clean technologies and waste reduction innovations.

The view of the Bingham Canyon Mine from the International Space Station (ISS), approximately 400 kilometres above the Earth.

Did you know?

As far as craters go, the Bingham Canyon Mine is similar in shape and size to the Corossol Crater – which has also been designated a national historic site. And just like the Kennecott mine, the Corossol Crater is four kilometres wide. Hypothesized to be the impact from a meteorite, the crater itself is located underwater on the floor of the Gulf of Saint Lawrence in Quebec, Canada. It was named after King Louis' ship of the same name, after it sank near the current Quebec city of Sept-Îles in 1693 in the month of November – making it a relevant inclusion for this "This Month in History" article.

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